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2. (Amended) The copolymer library of Claim 1, wherein said copolymers are formed by a free-radical polymerization process.

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3. (Amended) The copolymer library of Claim 1, wherein said copolymers are formed by ionic polymerization.

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5. (Amended) The copolymer library of Claim 1, wherein said copolymers are separately polymerized in solution.

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9. (Amended) The copolymer library of Claim 1, wherein said copolymers are further modified by chemical reactions or cross-linking.

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10. (Amended) A condensation polymer library comprising a plurality of different copolymers, each separately polymerized from (1) a first monomer selected from the group consisting of a first homogeneously varying series of monomers with the same polymerizable functional groups; and (2) a second monomer selected from the group consisting of a homogeneously varying series of second monomers having the same polymerizable functional groups that are reactive with the polymerizable functional groups of said first series of monomers to condense to form copolymers.

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14. (Amended) The polymer library of Claim 10, wherein said copolymers are separately polymerized in solution.

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17. (Amended) The polymer library of Claim 10, wherein said copolymers are separately polymerized in the absence of a catalyst.

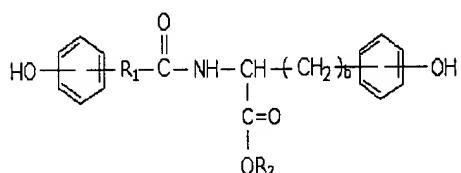
18. (Amended) The polymer library of Claim 10, wherein said polymerizable functional groups of said first monomer series are amine or hydroxyl groups and said polymerizable functional groups of said second series of monomers are selected from the group consisting of carboxylic acids, esters, anhydrides and isocyanates.

19. (Amended) The polymer library of Claim 18, wherein said plurality of different copolymers comprises a plurality of different terpolymers each separately polymerized from said first and second groups of monomers and a third monomer selected from the group consisting of ethylene oxide, propylene oxide, isopropylene oxide, butylene oxide, isobutylene oxide and random and block polymers and copolymers thereof.

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Claim 19*

20. (Amended) The polymer library of Claim 18, wherein said polymerizable functional groups of said first monomer series are hydroxyl groups and said polymerizable functional groups of said second monomer series are carboxylic acid groups.

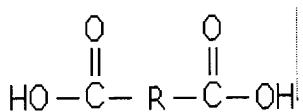
21. (Amended) The polymer library of Claim 20, wherein said first monomer series comprises a plurality of different diphenol compounds, each having the general structure:



wherein R₁ is selected from the group consisting of -CH=CH-, (CH₂)_a, and -CHN(L₁L₂), in which a has a value from zero to eight, inclusive, and L₁ and L₂ are independently selected from the group consisting of hydrogen and straight and branched alkyl and alkylaryl groups containing up to 18 carbon atoms, provided that L₁ and L₂ are not both hydrogen; b independently has a value between 0 and 8, inclusive; and R₂ is selected from the group consisting of straight and branched alkyl and alkylaryl groups containing up to 18 carbon atoms.

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23. (Amended) The polymer library of Claim 20, wherein said second monomer series comprises a plurality of different dicarboxylic acid compounds, each having the general structure:



wherein R is selected from the group consisting of saturated and unsaturated, substituted and unsubstituted alky, aryl and alkylaryl groups containing up to 18 carbon atoms.

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24. (Amended) The polymer library of Claim 21, wherein for one or more of said monomers of said first monomer series, at least one of R₂, L₁ or L₂ contain at least one ether linkage.

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26. (Amended) The polymer library of Claim 23, wherein for one or more of said monomers of said dicarboxylic acid monomer series, R contains at least one ether linkage.

27. (Amended) The polymer library of Claim 10, wherein said copolymers are further modified by chemical reactions or cross-linking.

REMARKS

This Amendment under 37 CFR § 1.111 is being submitted in response to outstanding Official Action mailed April 25, 2001. In view of the above amendments to the specification and claims and the remarks which follow, reconsideration and allowance of this application is respectfully requested.

The specification has been amended in response to correct the incomplete chemical structures objected to by the Examiner. In particular, the chemical structures of Formula I and Formula II have been corrected to add chemical bonds and phenyl rings. Formula I is disclosed in original claim 63 and Formula II is disclosed in original claim 52. These corrections therefore do not introduce new matter.

Claims 1-3, 5, 9, 10, 14, 17-21, 23, 24, 26 and 27 have been amended to more particularly point out and distinctly claim the subject matter that Applicants regard as the invention. In particular, these claims have been amended to clarify that the copolymer array is a copolymer or polymer library. Polymer and copolymer libraries are disclosed generally throughout the specification and particularly in the examples. See, for example, page 1, lines 12-15.

Claims 1 and 10 have also been amended to remove intended use language, as well as process limitations that did not serve to define the structure of the claimed composition. That is, the only process limitations that remain serve to define the library members as the polymerization products of homologously varying monomer series, with the definitions of the monomer series serving as limitations upon the structures of the polymers polymerized